THE SEED

November 1985

Vol. 7 No.11

NEWSLETTER FOR APPLE PEOPLE

APPLE PI USERS

PRESIDENT'S REPORT

The Christmas stuff is in the stores, a sure sign that summer is over. Speaking of the Christmas department . . . plans are underway for the annual Apple Pi Christmas Party. This year's party will be at the Green Center on December 5th (our usual meeting place). For this one meeting, the hours will be extended from 6:30 to 9:30. There will be refreshments, 50¢ library copies and lots and lots of door prizes. We will have a special guest speaker from Broderbund (all the way from California). Disk copies (from the Club library) will be available to both members and non-members alike. You may bring your own disks or Pi will have a special package available that contains five disks plus the copy fee (50¢ each disk) for a total price of only $9.00. Last year we copied hundreds of disk sides. This year, to expedite things, special order forms will be made available from the librarian. Everyone is welcome to the Christmas Party so bring a friend!

In the past, some //c or Enhanced //e compatability problems surfaced on some of the DOM's. To insure that this will not happen again, Ed Thompson (Club Librarian) is using the Club's Enchanced ROMs to test the DOMs for compatability. If you find any "Fixes" for public domain programs that Ed should know about, please give them to him so he can make the appropriate changes in the library. Remember to buy your DOM each month. They are your best software value and the proceeds support Apple Pi.

Have a great Thanksgiving and mark your calendar for the Christmas Party.

Randy Ansley

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MEMBERSHIP INFORMATION
$10 APPLICATION FEE AND $18 PER YEAR DUES

APPLE PI is an Apple Computer Users Group - not affiliated with Apple Computer, Inc. - that provides many member benefits, some of which are:

MONTHLY MEETINGS-

On the first Thursday of each month at 7:00 p.m. APPLE PI holds its general meeting at the Greene Center, Colorado School of Mines Campus, Golden, Colorado. This meeting is a combination of an informational meeting, new product announcements, and a short business meeting. The members are given an opportunity to buy computer supplies a little above cost. Software products are given away as door prizes.

On the Sunday following the general meeting there is an informal meet which is usually held at the home of a member, the location of which is announced in the newsletter and at the general meeting. This meeting is from 10:00 a.m. until 3:00 p.m. and provides a more informal environment to seek or give advice to fellow members and get copies of programs from the APPLE PI Library. Both of these meetings are open to the general public but only members have access to products that are sold.

PROGRAM LIBRARY-

APPLE PI currently has a library of 8,000 programs. All current disks are in 16 sector (3.3, Pascal, CP/M) format and are available to any member. APPLE PI Members can obtain copies from the library:

1) By coming to the monthly informal meeting (swap meet);
2) By written request to the club librarian (at any meeting or by mail);
3) By electronic mail on APPLE PI's bulletin board system:

When requesting copies, please include the following information:

a) Your Name, Address, and Phone number;
b) Disk Category and Volume Number;
c) Blank Diskette(s) or request to utilize a new disk (member will be charged $2.50 for the new disk);
d) Copy fee ($1.00 per diskette side unless you donate a program you have written at the same time and fill out a Progam Submission Form). Only complete sides of disks will be copied.
e) Instructions on how the disks are to be returned, i.e., at the next meeting, by mail, etc. (IF RETURN IS TO BE BY MAIL PLEASE BE SURE TO INCLUDE A STAMPED, SELF-ADDRESSED FLOPPY DISK MAILER, AND $2.50 TO COVER SHIPPING COSTS).

DISK OF THE MONTH-

Each month a collection of some of the best programs donated to APPLE PI during the preceding month are made available. The DOM can be purchased at any group meeting or by mail.

DUES-

Current membership dues are $18.00 per year, with a one-time application fee of $10.00. Checks should be made payable to APPLE PI.

V. P. REPORT

FUTURE MEETINGS

Your Vice President has reached the point where the schedule for guest speakers over the next several months can now be projected. For the November Meeting the speaker will be Ron Dries who is Program Specialist with the Jeffco School District. Mr. Dries has been with the School District since 1975 and will update us on their use of Logo and other educational programs. This will also be an opportunity to learn about JEFFCOM IV, the new BBS recently implemented for Administrators, teachers and students.

The December Xmas Party Meeting will feature a presentation and door prizes by Broderbund with door prizes also furnished by Apple Computer, Inc. (More on this meeting later). For the January and February meetings next year, we plan to have Checkmate Technology, a producer of peripherals for the Apple and Apple Computer, Inc. present their latest hardware upgrades for the Apple II line.

At the October meeting we were indebted to Quark Inc. for providing their Products manager, Tom Sine as our guest speaker. (Our busy Club President could not preside at the October regular meeting due to a business conflict). Mr. Sine presented a brief, but interesting review of Quark products, i.e. The QC series of hard disk drives, Quark's Catalyst Program and their word processor, Word Juggler.

The QC-10 Hard Disk drive requires 128K RAM memory and one floppy disk drive. Unfortunately, it will not work with the Apple II Plus. Some of the basic capabilities of their fine word processor, Word Juggler, such as cursor movements, deletion of words, lines and entire paragraphs were demo'ed. This program also scrolls left/right for documents greater than 80 columns, up to 256 characters in width.

The Catalyst program selector software manages all the hard disk applications from a main menu. Appleworks was the example selected to demo the program's management capabilities. Catalyst will also handle most copy protected programs onto high capacity disks, such as the QC10 and QC20 hard disks from Quark and Apple's ProFile hard disk, as well as Apple's new UniDisk 3.5. You can then switch between programs without having to reboot.

The new Catalyst 3.0 interface program (suggested retail $149) works with a Mouse and uses Apple's recently announced Memory Expansion Card (slot 4). With this card installed the operating system looks at it as a 1 Mb. disk drive. This new program is expected to be a forerunner of similar programs for the IIe and IIc series in that it appeared on the monitor just like the MacIntosh display complete with pull down menus and icons. Incidentally, Quark is also working on a 16 Bit co-processor for the Apple.

In response to a question asking his opinion of the future of the IIe, Mr. Sine replied - "It's forever; it's just too flexible for Apple to drop. With Steve Jobs out, the outlook is even better because he disliked the Apple II group."

ATTENTION APPLEWRITER IIE OWNERS

You should know that IAC Disk 46 contains a series of Applewriter IIe files (71 in total) that implement a number of new features for DOS 3.3 versions of the program. The routines are written using WPL and are self installed on a copy of your master disk as you respond to prompts. The new programs give you the ability to control most DOS functions from inside Applewriter and will even write a disk directory directly into an Applewriter file. You can get a copy of the disk at any Core meet, at the December general meeting, or by special arrangements with the librarian.

denver apple pi

NEW MEMBERS ATT'N!

If you are a new member of Apple Pi, and have new member questions please feel free to call the New Member Contact Officer directly - Liane Nusse, 279-5763. Take advantage of all the club has to offer, and get your membership's $$ worth! One often over-looked information source is the newsletters that Apple Pi swaps with other Apple Clubs all over the country - they are available for browsing at CORE meets - frequently they have beginners articles. When I first joined the club as a new Apple owner, they were very helpful to me. See you at general meetings and CORE meets!

KID'S STUFF -

The Apple Pi Club public domain library has several really excellant programs for kids. One of the favorites of our older day care kids is "Solar Travel" - a really amazing program for the price! The kids can travel (with great graphics!) from Earth to several different planets by any mode of travel from walking to the speed of light. The program will tell them exactly how long it will take to get there, right down to the second! For instance; walking from Earth to Pluto would take 162,621 years - going by plane would take 967 years, and travelling the speed of light would only take 5 hours, 11 minutes and 4 seconds!!! One of our day care kids, Todd, found out that if he weighs 41 pounds on Earth - he would weigh 6.56 lbs. on the moon, 15.58 lbs. on Mercury, and 1139.2 lbs on the Sun! Todd sat down for almost 2 hours with this program and charted all the distances with all the modes of travel to take home and show off to his parents. (Can you imagine the attention span if he had been told to get out the encyclopedias and research the same info?!) All this plus several other programs including an algebra program, countries and their capitals, story teller and several others. This is the librarys DOM #19, and it only costs $5.00 - can't beat that! Have questions about other kids programs? Call Liane Nusse, 279-5763.

THE STORE MEMBERS

COLORADO SOFTWARE CONNECTION
P.O. BOX 29869 DENVER, CO 80229-0869 (303) 756-8619

Connecting Point

adam's computers, inc.
3355 So. Wadsworth Blvd.
Lakewood, CO 80227 (303) 986-9655

colorado Computer Systems, Inc.
3005 West 74th Avenue
Westminster, CO 80030 (303) 426-5880

ComputerLand®
8749 Wadsworth Blvd.
Arvada, CO 80003 (303) 420-1877

ComputerLand®
2422 So. Colorado Blvd.
Denver, CO 80222 (303) 759-9140

The Neighborhood COMPUTER STORE
13045 West Alameda Parkway
Lakewood, CO 80228 (303) 988-9140

DEAR JOHN

Dear John,

I want to make some noise in my basic program. How can I do that?

Soundless

Dear Soundless,

The easiest way is to use the bell Apple provided at ascii character 7. In your BASIC program, insert the following statement:

PRINT CHR$(7)

Another way to make some sound is to peek the speaker location. That can be done in BASIC as follows:

FOR I=1 TO 200:SOUND=PEEK(49200):NEXT

More sophisticated sounds require the use of a machine routine. You can find several of these is the club library.

John

Dear John:

Why does Apple not put a 10 key pad on the keyboard like most other computer companies?

NUM

Dear NUM:

Apple's position on the ten key pad is that if left off, the unit price will be lower. For the people that really need or want a ten key, one is available for $99.00 (less from other manufacturers). Apple's thinking is "if you don't want one, why pay for one".

John

Dear John:

On a DOS 3.3 disk I have there is a file on it with an "R" code. I tried to RRUN it but it doesn't work! What is an R file?

RRRRR

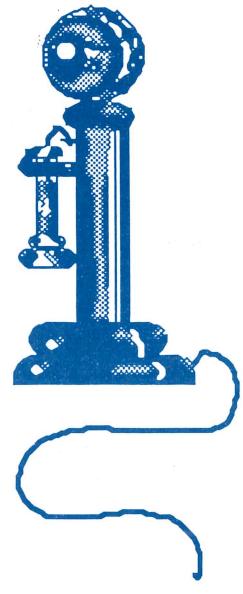
Dear RRRRR:

An "R" file is relocatable machine code. It doesn't pop up very often but is like an "S" file, only relocatable. An "S" file is also not seen much and stands for system. "R" and "S" files cannot be run from the keyboard.

A	=	Applesoft
B	=	Binary
I	=	Integer BASIC
T	=	Text
S	=	System
R	=	Relocatable System

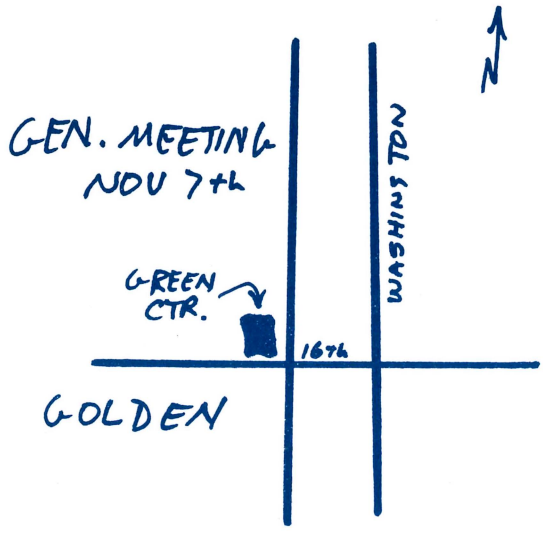
John

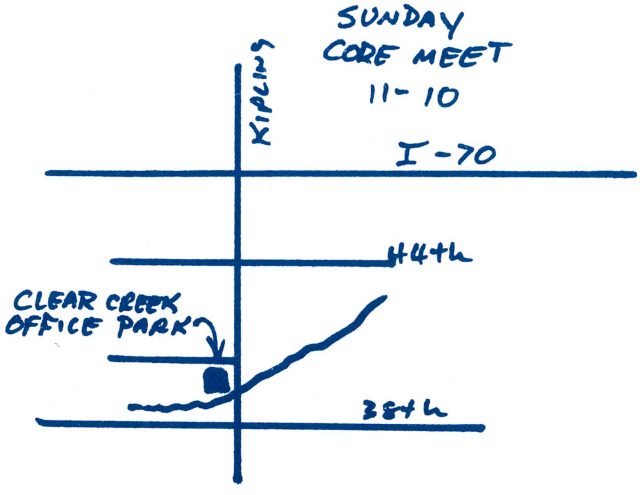
APPLE PI GETS NEW MESSAGE CENTER!

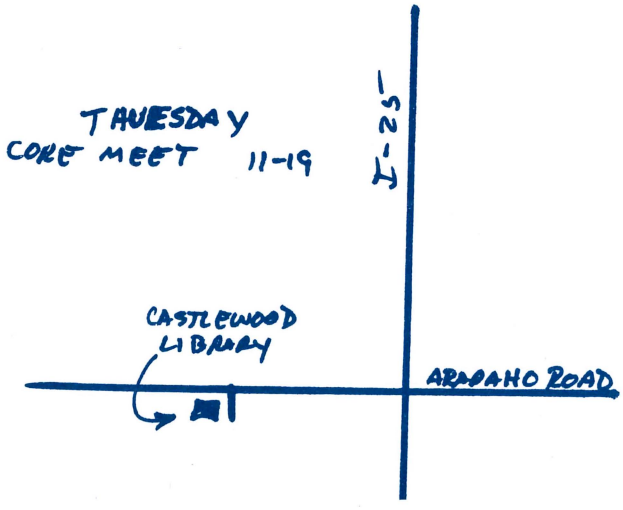


CALL

273-1150







LIBRARIAN'S REPORT

DOM sales in October totaled 31 and 95 Library copies were made! At the south side Core meet in September, 27 copies were made. We are continuing to distribute hardcopy catalogs and plan the next revision for the December meeting.

The November DOM contains the programs listed on the label below. This month, there are 9 major programs with 1 free sector and include 3 games, 4 educational programs and 2 utilities.

The November feature is Fireground which is a high quality arcade created with Broderbund's Arcade Machine. The other games include a hires chess game and an alien game called Sabotage. The educational programs all have great graphics and include a music learning game called Musicgraph, a clock instruction program called time teacher, an early age math drill called Tic Tac Add, and a science program called Water Polution.

The utility programs include Binary Entry Utility (BEU) and Sketch Pad. BEU will enter those hexadecimal listings you see in magazines and has word processor features to make it easier. It is the best program of it's type I've seen, free or otherwise. Sketch Pad is a simple hires drawing program to create or edit a hires picture.

```
Denver Apple Pi's Disk of the Month
#  64     NOV.     1985  DOM
APPLE PI DOM NOV 1985 FIREGROUND          MICROCHESS 2.0 START
SABOTAGE              MUSICGRAPH          TIC TAC ADD
TIME TEACHER          WATER POLUTION      APPLE PI DISK SELECT
BINARY ENTRY UTILITY  BINARY ENTRY UTILITY. MENU
SKETCH PAD            BINLOAD             DIGITAL.SET
GOTHIC.SET            HIRES               INTBEU.1
MICROCHESS 2.0        MUSIC.GRAPH A$300 L$F POLUT.1
POLUT.2
```

We are looking for copy help at the Sunday core meets! If anyone out there can donate about six hours, one Sunday a month, we can provide transportation and we'd love to have you. Pay is low but you meet the greatest people. Who knows, you could start a new profession and earn the undying gratitude of fellow Pi members. Seriously, we would like to hear from you!

See you at the general meeting!

--Ed Thompson, Librarian--

GREEN APPLES

One of the least used Applesoft BASIC commands is "EXEC". The EXEC command will look for lines of code in a text file and insert them into the appropriate place in memory as run time code. SAY WHAT? Let me put is another way. You could write your programs on a word processor, using all the editing goodies, then EXEC it and end up with a program in memory ready to run. One place this comes in handy is for Downloads on the BBS. When you copy a public domain file from the BBS to your computer and save it you end up with an ASCII text file. To use it , you EXEC it. To do this, type: EXEC (Filename). The screen will scroll a bunch of "]" for each line that is done until the whole program is ready. Then type: SAVE (New Filename).

You can also use the EXEC command to change a program on the fly (while it is running). Let's say you want a special message to come up the first time you run a program but a different message any time you run it after the first time. The code could look like this:

Code to make EXEC file (or use a word processor)

```
10 A$ = "30 PRINT" + CHR$(34) +"This program
     was run before" + CHR$(34)
20 D$ = CHR$(4)
30 PRINT D$ "OPEN XXX"
40 PRINT D$ "WRITE XXX"
50 PRINT A$
60 PRINT D$ "CLOSE XXX"
```

This code will make a text file with the line 30 PRINT "This program was run before". Now you can use it in the following program:

```
10  D$ = CHR$(4)
20  HOME
30  PRINT "This program has never been run"
40 PRINT D$ "EXEC XXX"
50  REM Rest of Program...
```

When you run this program, line 30 will print its message, then line 40 will EXEC in the new message from the file "XXX". This new message will become a permanent part of your program but must be saved to disk to make the total change.

One last note. On the code to make the EXEC file, line 10 can be confusing. CHR$(34) is a way to represent a quotation mark. In order to assign a print statement to a string variable, you must do it this way or suffer a dreaded syntax error.

Updated Imagewriter Printer Disk Available

Attention Imagewriter Owners! The club now has available an updated version of the Imagewriter printer disk. The disk is for use on a IIe or enhanced IIe with super serial card and is available from the Apple Pi Store for $5.00. If you purchased the older version, bring it in and we will update your copy at no charge.

On the disk you will find the same options as before but with several enhancements. Twenty-five fonts have been added to give a total of 46 and the demonstration program now allows the choice of demo-ing to the monitor as well as printer. You can scroll through the names of the fonts and display to the monitor whichever ones you'd like to see.

The options on the disk include a font editor developer, a font download program, a diskette labeler, a printer setup and reset program, example screen dump routines, a program to set the perforation skip, a font demonstration program, and 46 developed fonts.

The IAC has distributed the disk as IAC Disk 51, but ours is now better! The disk is a super value and one which Imagewriter user's will find indispensible. Check for it at the Store.

If you have wanted to create a new font but were not able to decipher the instructions in the Imagewriter Manual, then this is for you! The disk not only includes fully developed fonts but also includes a utility to edit a font to create your own custom characters. So, if you haven't purchased a commercial printer program already, give ours a try.

EARLY EDUCATION SOFTWARE

Reviewed By APPLE PI Appleseeds

Apple Pi Elfware - Available through Denver Apple Pi - $17.50-----Great alphabet program - wonderful music sound accompaniment, also includes words representing letters. Letters appear in capital letters, words in lower case. Needs very little adult assistance - Kindergarten level, or excellent for learning impaired.

KinderKoncepts Math and Letter discs - Many different levels of math and letter activities with enough interest to keep kids wanting to continue. Many different activities at different levels on each disk. Midwest software, advertisement folders included.

Romper Room's I Love My Alphabet - First Star Software Inc., 18 East 41st St., New York, NY - Stars a very loveable character, "Max", who leads the little people in four different levels of alphabet familiarity. Also excellent for keyboard familiarity, and some sight-word reading experience. Kindergarten through second grade.

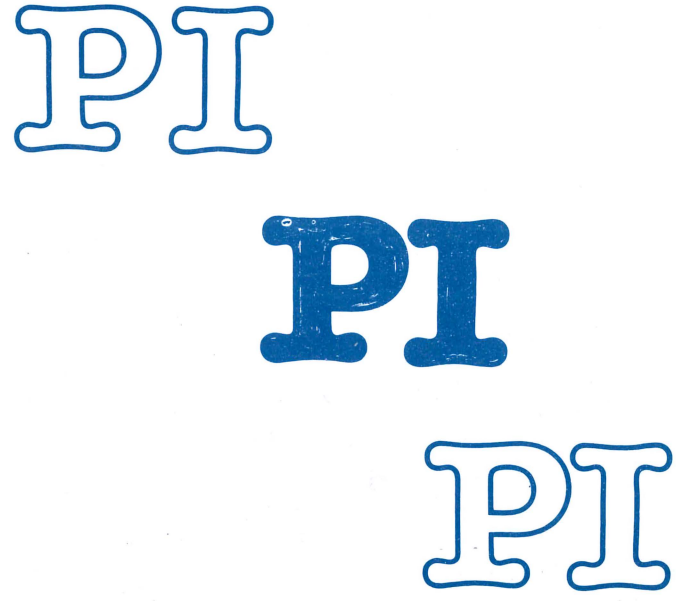
Verbatim's 1st Internat'l Computer EdGame Challenge - Excellent disk of three different games from Verbatim's contest! Disk cost - $3.50!!! The quality of the games on this disk is comparable to other programs costing $30 - $40! Dr. Oz's Cavern requires very little assistance and is a wonderful math tutor on many different levels for adding, subtracting, multiplication. Language arts inchworm is great for state familiarity. Spell-off is also a quality program and even allows addition of your own words. You can't miss for a $3.50 program! Verbatim Co., Sunnyvale, CA 94086.

Children's Carrousel - Dynacomp - Available through Adam's Computers - $19.00 - Has many different activities on Kindergarten through third grade level, or great for learning impaired. Pre-reading activities, pre-math acitivities - also has good typing program with large letters appearing on the screen.

Several area day care homes are effectively teaching young children (as young as five) touch typing, using several different methods, beginning with keyboard familiarity.

There are many, many other programs now available at much more reasonable costs now that competition is producing a larger variety.

The Denver Apple Pi Club is trying to form a special interest group called "Appleseeds" . Some of the goals of this group would be: fund raising to develop an elementary level library of software which could be checked out by members, and sharing curriculum ideas. Each person working with computers has found many resources, and has many ideas which, if shared, would develop a much larger curriculum to choose from. If you are interested in joining Apple Pi (which has many other benefits) and helping with this social interest group, call Liane Nusse at 279-5763.



Personal Domain Software Revisited

Since we listed our personal domain software in August, we have added the 10 disks which are listed below. For a complete list pickup our paper catalog at the December meeting.

What do we mean by Personal Domain? Well, that means you are permitted to copy a copyrighted, commercial program so that you can try it to see if you find it worthwhile for your needs. If you want to continue using it after the trial period, the author, not Apple Pi, requests that you buy the program by sending a payment directly to the him or her. Usually the personal domain disk has abbreviated instructions on the disk and usually you receive an updated disk and/or printed manual if you purchase the program. Apple Pi does not endorse any commercial product nor does it seek to guarantee, enforce, or communicate with the author in any way. The list below includes the information on requested payment as it is found on the specific disk. If you copy any of these disks do not, I repeat, do not send money to Apple Pi!

1. **Hinky Pinky.** $25.00. This 2-sided program by 22nd Avenue Wordshop is positively commercial quality. It is a vocabulary learning game based on guessing pairs of rhyming words from various types of clues. It has 3 levels of dificulty, will correct spelling, and can be customized by creating your own problems.

2. **Math Facts**. $20.00. Version 1.5. This disk is a teachers aide progressive drill program in the four basic math operators and has a facts section also. It automatically progresses as skills improve and prints a certificate for successful completion of each level.

3. **Math Invaders**. $10.00. Combines math facts with an arcade shooting gallery. Has a very nice interface which is worth seeing. Unfortunately, only the addition game works properly. The others generate random noise! When received, the disk had the other operations locked out of the menu but they have been restored. An attempt to reach the author by phone was unsuccessful. For the adventuresome.

4. **Mad Poet**. $15.00. Poems are written from nouns, verbs, and phrases which are selected randomly from text files stored on disk. Each poem is unique from the previous one and is accompanied by a hires drawing.

5. **Music Disk.** $5.00. This disk contains 33 diferent selections of music which were created with the "Electronic Duet." Very nicely done with menus for each category of music and has a play all feature.

6. **Hi-Res Doodle**. $10.00. This is a graphics system that allows you to make drawings on the hires screen and paint them with a variety of colors.

7. **Bank'N**. $10.00. This program takes care of your banking and finances. It's menu includes a checkbook using expense codes that can accommodate about 1300 transactions; a bank reconciliation program; and a transaction query program which allows you to select and display transactions based on some selection criteria.

8. **Callaway Golf Handicapping**. $25.00. This program handles the workings of amateur golf tournaments of up to 300 golfers. Callaway handicaps, prints scores, and sorts low gross or low net scores.

9. **Diversi-Dial**. $50.00. This disk contains a 7-line CB-simulator. The disk allows you to set up a 7 station network to chat with up to seven people at a time. All you need is seven phone lines and seven Apple Cat II modems.

10. **Omnifile.** $25.00. A database program which will work on either a 48k or 64k Apple. Allows you to input records and sort and print them as desired. Includes several powerful search routines and seems to be a well-tested program.

Also, in addition to these new programs, please note that a newer version of the EVE terminal program is being distributed. Ours is 1.1 and I have sent for version 1.2. This later version adds a dialing directory and other features and remember it had X-modem support initially.

If you are aware of additional Personal Domain Disks, please let me know. I think this marketing arrangement offers strong advantages to author and user and I'd like to build on our collection.

---Ed Thompson, Software Librarian---

ProDOS TECHNICAL NOTE #10

Installing Clock Driver Routines in ProDOS

(Revised 8 November 1983)

If you wish to support clock cards other than the ThunderClock, there are a number of possible places to locate your code. The "cleanest" place is to replace the ThunderClock routines located in ProDOS with your routines, if your code will fit.

When the ProDOS system file is executed, it installs the address of the ThunderClock routines at $BF07,$BFO8 whether a card is present or not. The address is preceeded with a $4C (JMP) if a ThunderClock card is found or a $60 (RTS) if it was not.

The ThunderClock card is identified by looking at the $Cn00 ROM for:

$Cn00 = $08	$Cn02 = $28
$Cn04 = $58	$Cn06 = $70

If you look at $BF07,$BF08 you will find the location to put your code. There is room for 125 bytes.

To install your code, simply write enable the "language card" area, and move your code. Don't forget that your relocation code must justify the absolute addresses as part of the relocation procedure. Finally, restore any soft-switches you have changed. (There is no guarantee as to the absolute location of the clock driver code on future revisions of ProDOS, only that its location may be found by examining the global page, as mentioned above.)

All that your code need do is get the time from the clock card, convert it to the ProDOS format and store it in the date and time locations in the global page.

Your installation routine can be called from an application or as part of the STARTUP program.

ProDOS TECHNICAL NOTE #9

Buffer Management using BASIC.SYSTEM

(31 August 1983)

BASIC.SYSTEM provides buffer management for file I/O. Those facilities can also be utilized from machine language modules operating in the ProDOS/Applesoft environment to provide protected areas for code, data, etc.

BASIC.SYSTEM resides from $9A00 upward with a general purpose buffer from $9600 (himem) to $99FF. When a file is opened, BASIC.SYSTEM does garbage collection, if needed, moves the general purpose buffer down to $9200 and installs a file I/O buffer at $9600. When a second file is opened, the general purpose buffer is moved down to $8F00 and a second file I/O buffer is installed at $9200. If an EXEC file is opened, it is always installed as the highest file I/O buffer at $9600, and all the other buffers are moved down. Additional regular file I/O buffers are installed by moving the general purpose buffer down and installing it below the lowest file I/O buffer. All file I/O buffers, including the general purpose buffer, are 1K (1024 bytes) and begin on a page boundary.

BASIC.SYSTEM may be called from machine language to allocate any number of pages (256 bytes) as a buffer, located above himem and protected from Applesoft BASIC programs. The ProDOS bit-map is not altered so that files may be BLOADed into the area without an error from the ProDOS kernel. If you subsequently alter the bit-map to protect the area, it is your responsibility to mark the area as free when you are finished... BASIC.SYSTEM will not do it for you.

To allocate a buffer, simply place the number of desired pages in the accumulator and JSR GETBUFR ($BEF5). If the carry flag returns clear, the allocatioin was successful and the accumulator will return the high byte of the buffer address. If the carry flag returns set, an error has occurred and the accumulator will return the error code. Note that the X and Y registers are not preserved.

The first buffer is installed as the highest buffer, just below BASIC.SYSTEM, from $99FF downward, regardless of the number and type of file I/O buffers that are open. If a second allocation is requested, it will be installed immediately below the first. Thus, it is possible to assemble code to run at known addresses ...relocatable modules are not needed.

To deallocate the buffers created by the above call, it is only necessary to JSR FREEBUFR ($BEF8) and all of the buffers will be deallocated and the file buffers will be moved back up. It is important to note that although more than one buffer may be allocated by this call, they may not be selectively deallocated.

COMPUTER SURVEY

This Questionnaire will be used to compile statistical information as to the types of computers and software that Apple Pi members use, and what types of tasks their computers are used for. Please fill out this form (or a copy of this form) and mail it to us. The data will be in a future issue of the SEED. Bring it to a meeting or mail it to:

DENVER APPLE PI
P.O. Box 17467
Denver, CO 80217

My computer is:

_____Apple][_____Apple][+ _____Apple //e _____Apple //c _____Apple ///
_____Lisa _____Lisa XL _____Macintosh _____Other_____

My Computer has _____(?) RAM:

_____32K _____48K _____64K _____128K _____256K _____512K
_____768K _____1M or more

I have the following goodies:

_____1 Disk Drive _____2 Disk Drives _____Dual Drive _____3 1/2 Drive
_____Hard Disk _____M _____Tape _____Other Storage_____
_____Printer _____Clock Card _____ROM Card _____Mouse
_____Modem _____300 _____1200 _____2400 _____Other _____ROM Blaster
_____Monochrome Monitor _____Color Monitor _____RGB _____Graphics Tablet
_____Light Pen _____Joystick _____Koala Pad _____Paddles
_____Video Input Device _____Other:_____
_____
_____

Software (How many commercial Programs?):

_____Word Processors _____Data Base _____Spread Sheet _____Integrated
_____Games _____Accounting _____Educational _____Languages (Computer)
_____Languages (Spoken) _____Utilities _____Other:_____
_____

I use my computer mostly for:_____
_____

I have owned a compute for _____years _____months.

I program in:

____BASIC _____ASM _____Forth _____C _____Fortram _____Pascal _____Logo
____Cobol _____Lisp _____Pilot _____Other:_____
____I do not program

I would like to help Apple Pi doing_____
_____

I would _____like _____not like my name given out to vendors that have Apple products.

I would like to know more about:_____

NEXT MEETING

NOV. 7th

THE SEED

denver apple pi

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